

as broad at apex as long; second and third tergites much broader than long, the second slightly longer than third; basal three tergites strongly coriaceous and dull, the others faintly sculptured and shining; hypopygium not nearly attaining apex of abdomen, compressed, weakly incised on apical margin, not angulate laterally.

Black; scape, pedicel, labrum, mandibles except teeth, palpi, and all legs entirely yellow; tegulae blackish; wings hyaline, costa and stigma brown; venter of abdomen piceous.

Type locality.—Jackson, Ohio.

Type.—United States National Museum No. 55665.

Described from fifty-one female specimens taken by L. G. Wesson, July 15, 1938, as they were hovering over a raiding column of *Formica sanguinea rubicunda* Emery. Some of the paratypes in Wesson's collection.

GEOCORIS ATRICOLOR FEEDING.

BY G. F. KNOWLTON AND G. S. STAINS, Utah Agricultural
Experiment Station, Logan.

A black big-eyed bug, *Geocoris atricolor* Montd., found among aphids in an infested pea field near Logan, was brought into the insectary where it was caged in a 4-dram shell vial with several pea aphids (*Macrosiphum pisi* Kalt.) of different ages. Activity of the specimen was observed under a wide-field microscope. Approximately 7 minutes after being placed in the vial, a second instar pea aphid nymph was quickly grasped by the *atricolor*, which used its front tibiae and tarsi to hold its small prey while it pierced the aphid with its feeding stylets at a point along the suture between the third and fourth segments of the abdomen. After such feeding insertion, the aphid was released by the predator's legs but was securely held, extended at the tip of the predator's rostrum. Feeding occurred in this manner for twenty-two minutes; the shriveled aphid body was discarded, most of the fluids having been removed.

Following a five-minute rest, a third instar pea aphid was seized in the same manner as the first. The labium of the predator was pushed against the abdomen of the prey, and soon the stylets were observed to have entered the aphid body and to be exploring the various areas within reach, even extending into the legs. The length of the stylets observed within the aphid body varied greatly,

such length being governed by extending and retracting the labium with hinge-like movements of the segments. There was some indication that digestive fluids were injected to accomplish partial predigestion. A short time after penetration of the feeding bristles, areas reached by the stylets became paler in color, suggesting that some chemical change may have occurred; during this time the aphid's abdomen had not shriveled as usually occurs when predators suck out the body fluids from aphids and nymphal psyllids. While the stylets of the predator were extended into a femur of the aphid, air bubbles appeared, these being ejected from the end of the slender feeding structures. The leg gradually was filled with bubbles. Liquid also may have been ejected. Pigment of one eye of the aphid began to disintegrate, suggesting that the predator stylets had pierced it, or that digestive juices had caused it to break down. Coagulation of the pigment seemed to occur, rounded dark particles being drawn out to become more elongate as feeding upon them occurred. The dark particles were seen to be taken in at the end of the feeding structures. During the 18 minutes of feeding on this specimen, body shrinkage was not apparent until more than 13 minutes of feeding had elapsed.

Occurrence of *Orbellia hiemalis* Loew in Maine (Diptera).—

This European species, originally described under the generic name of *Crymobia* Loew (1859), is remarkable in that it seems to occur only during the colder months of the year from late fall to early spring. I collected a single female specimen in November at Orono, Maine, many years ago. Dr. D. G. Hall states (in lit.) that there is a specimen from Custer County, Colorado, in the U. S. National Museum. Aldrich (1926) in his key included the genus with those lacking a humeral bristle. This is a mistake, the known species of the genus have such a bristle. The same error occurs in Curran's key (1934). The generic names *Anorostomoides* Malloch (1916) and *Barbastoma* Garrett (1921, 1922, 1924) as well as *Crymobia* Loew (1859) are apparently all synonyms of *Orbellia* R. D.—O. A. JOHANNSEN, Ithaca, N. Y.